

Microclimate Cooling System (MCS)



The Microclimate Cooling System (MCS) reduces heat stress to Army helicopter crewmen, especially those wearing chemical protective equipment in hot weather. The MCS provides a combat advantage to Army aviators by permitting an increase of more than 350 percent (from 1.6 hours to 5.7 hours) in heat stress mission endurance for crewmen wearing chemical protective equipment or other crew member clothing. It features a vest and a cooling unit that pumps chilled water through small tubes embedded in the vest. MCS includes a quick-disconnect function to allow aircrew to safely and quickly egress an aircraft without a snag hazard.

Performance Characteristics

- The Microclimate Cooling Garment (vest) is worn as an undergarment beneath chemical protective clothing or other crewman clothing.
- The Microclimate Cooling Unit (MCU) is an autonomous vapor compressor system that chills water and pumps it through small tubes embedded in the vest.